Enterprise Data Management

Is This the Right Time for an Outsourced Solution?

TABB GROUP

Robert Iati | V04:004 | April 2006 | www.tabbgroup.com

Vision

You know reference data management is the New New Thing, because the industry has latched on to a catchy new acronym—EDM (Enterprise Data Management). But seriously, the collective acknowledgement of the importance of reference data is nothing to push aside, nor is the EDM acronym. It's not as if our reference data has all of a sudden gone bad. It's always been that way. More importantly, industry changes have made it imperative that EDM remedy not only the symptom, (bad data), but its cause. That's where the acronym comes in. Enterprise data management is more than just a fancy new phrase to describe reference data. EDM represents the growth in the industry's recognition of the cause of its data woes, which is mainly the adherence to fragmented information silos and patchwork point systems—and its corresponding solution—a cohesive, holistic, *enterprise-wide* solution. Indeed, this is progress.

The front office has directed considerable focus over the past three years on automated trading, which relies on sub-second decision making. Securities operations continue to strive to achieve straight-through processing (STP) to optimize their workflow and eliminate the need for human intervention by developing automated means of identifying transaction errors, repairing them, and injecting the transaction back into the process with little or no time lag. Lastly, everyone from senior management down to line managers is hyper-sensitive to the growing influence of regulation. Recent clamp-downs on seemingly every primary function have created a severely heightened awareness (and fear) of the potential damage resulting from non-compliance. All of these have one thing in common— a crucial need for pristine reference data. As a result, with so much at stake, the securities industry's efforts to achieve the highest quality data will only be accelerating.

Following decades of a loosely held belief that reference data is a commodity, brokerage firms and asset managers now acknowledge that bad data and poor maintenance processes cost them real money and opportunity. They can cite optimal trading opportunities, exceptional management of their portfolio risk, and low-cost operation as real goals. As a result, they have adopted the belief that if they work hard enough at acquiring and maintaining good quality data, they in fact will be one step ahead of the competition.

The industry as a whole has raised the issue of standards and centralization for the past decade. However, it has received only modest attention. TABB Group believes that for the industry to take its EDM efforts to the next level, each firm must begin by reaching a higher level of data centralization, both in its organization and repository. While the organizational stumbling block is large and requires an Olympic hurdle to overcome, the combination of high-quality technology solutions and the industry's commitment to resolution is pointing efforts in the right direction. In addition to agreeing on standard symbology, firms that strive to achieve reference-data best practices will need to concur on a set of standard data-usage evaluation metrics.

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Now that we have an EDM catalyst, and have reached at least a modest acknowledgement and understanding of the obstacles, where will we go for real solutions? Many would like us to believe that the solutions will be found in outsourced or shared-service models. Since both asset managers and brokers have embraced outsourced solutions in other areas of their business, is the time right for a managed reference data solution (MRDS)?

The answer depends on whom you ask. Many different types of firms have either already introduced, or are investigating the opportunities for, outsourced solutions. Every flavor and combination of professional services firm, BPO organization, market-data vendor, technology platform provider and industry utility has raised its hand to provide the solution. But for any MRDS service offering to succeed, it will undoubtedly need to gain industry trust, which until this point has only been hard-won and hard to keep.

In order to gain that trust, the provider must exhibit not only competence in providing the highest quality data, but do so in a manner that inspires confidence from the community. This is best accomplished by focusing on giving the community what it wants most—unbiased service using state-of-the-art technology to deliver a "golden copy" of data at a reasonable cost. It's logical to say that if an organization was able to deliver all of these features, MRDS would become the norm in the industry. But most of us have seen enough to know that the transition will come chock-full of bumps in the road and meet with its share of nay-sayers.

So is the time right for an outsourced EDM solution? The momentum is undoubtedly building for more firms to outsource some segments of their data operations, which will drive the herd mentality of many other institutions.

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"... These guys, they just don't want to change the way things are today. If we could get some momentum among all the firms in the industry, we'd move a long way towards improving the process."
- US Sell-Side

Introduction

Reference data, like Rodney Dangerfield, gets no respect. While a necessity, reference data accuracy has traditionally been taken for granted. However, this is beginning to change as events across all main securities businesses are crying for greater data cleanliness. In a short time, trading has evolved into a highly automated operation where split-second decisions are made by computers. Foreign markets are picking up, forcing firms to expand their product coverage and trading partners. Fixed income and derivative businesses are booming and exceptions are overwhelming operations departments. Regulators are requiring institutions to provide better clarity, forcing them to assemble reports and implement procedures driven largely by reference data. And just as importantly—albeit with less fanfare—the industry has moved to improve processing efficiency and reduce costs. Now Enterprise Data Management (EDM), this long-neglected crucial element of the business, has become a major initiative on the docket of virtually every industry firm.

Brokerage institutions place great value on data accuracy and have intensified their efforts to maintain pristine data, the often-cited "golden copy." Today, more than ever, asset managers and brokerage firms rely on accurate and accessible reference data to fulfill their wide-reaching needs. However, the problem faced by all of these companies is that, after technology proliferation and industry consolidation of the '80s and '90s, their reference data systems need an overhaul to bring them into the 21st Century.

Did any of them know how good (or grudgingly, bad) their data was? Had any of them ever reviewed their processes to determine their practicality, reliability or efficiency? Was anyone familiar with alternative solutions that could help support their business and (hopefully) offer state-of-the-art answers to their business problems? The answer to these questions was generally "yes," however, the cost of an enterprise solution, compounded with the siloed nature of the industry, did not require the industry to react immediately.

This however, has changed. TABB Group projects that reference data errors comprise 5% to 10% of trade costs (due to failed trades), and it is not uncommon to see the

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largest firms spend US$75 million on EDM. This kind of outlay raises the profile of every segment of the business, as cost and business pressures are forcing firms to react.

The Reference Data Challenge

One of the obstacles to high-quality data was the way in which reference data had been viewed in this industry. It was, and still is, hard to implement a major, impactful, change to reference data. According to TABB Group research estimates, most large firms maintain between 25 and 75 different reference databases to support their daily operations. In order to truly be effective, reference datasets should be enterprise-wide. But while any enterprise-wide initiative must come down as a senior management initiative, most firms still drive them from the bottom up, stymieing nearly all large efforts.

"…We're having a problem with the reference data concept. So the challenges are many. I wouldn't know where to begin…"
- US Buy-Side

The typical reference data problem is directly related to a client issue (risk- or credit-related), but its repair is often championed more by the brokers' middle and back office operations departments than by their trading and front-office departments. Since middle and back-office operations have always faced more difficulty acquiring support and funding for such projects, few meaningful projects ever were completed. Most of the projects sponsored by operations were of a smaller, "point solution" nature, rather than anything of large scale that would, for the most part, put an end to the real issues at hand.

Now the industry as a whole has seized upon the reference data issue. Whether addressing their problems through internal process redesign, technology infrastructure, third-party software, or full-on outsourcing, the hunt for the pristine "golden copy" of data is on, with a diligence falling somewhere between the searches for Carmen Sandiego and the Holy Grail. The quality of data and effectiveness of process have each improved, lending credibility to the industry's efforts. However, as the business continues to dynamically evolve, the industry has come to the conclusion that we're only in the early innings of the game and the rules are changing as we go.

This TABB Group study presents views of the buy side and sell side firms on the current quality of their data, how they need to improve their processes, and their openness towards outsourced solutions.

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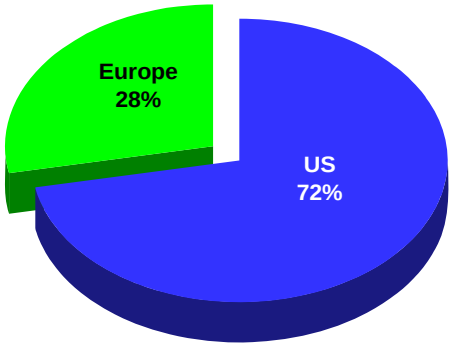
Methodology

To accumulate the information and data for this report, TABB Group interviewed heads of data management at 50 buy-side and sell-side firms. The participants encompassed both large and small firms located in Europe and the US. TABB Group segmented the findings in two major ways: by firm type and geography.

Exhibit 1
Report Participant Demographics

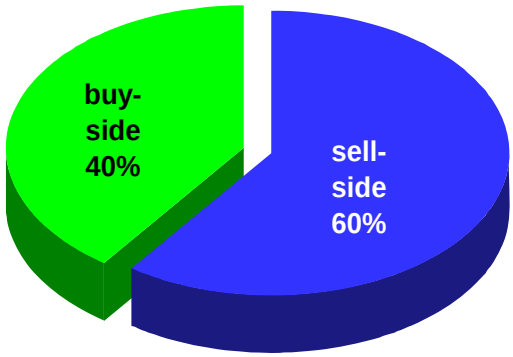


Source: TABB Group

For this study, 72% of the respondents resided in the US, with the European segment representing firms in the UK, Germany and France (Exhibit 1).

Broker/dealers comprised the majority of firms we spoke with, accounting for 60% of the sample (see Exhibit 2). While some represent the full breadth of the sell-side spectrum, including multi-asset class, multi-entity and multi-company, some represent the more focused world of the agency-only business. The remaining 40% of buy-side firms included only traditional asset managers, and no hedge funds.

Exhibit 2
Report Participant Firm Type



Source: TABB Group

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Key Points

- Reference data has experienced a sort of renaissance in recent years, spurred on by events in all main areas of the securities business.
- Brokerage institutions place great value on data accuracy and have intensified their efforts to maintain pristine data, the often-cited "golden copy."
- With reference data errors ranging anywhere from 5% to 10% of trade costs (due to failed trades), it is not uncommon to see the largest firms spend US$75 million on enterprise reference data management.

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Drivers of Change

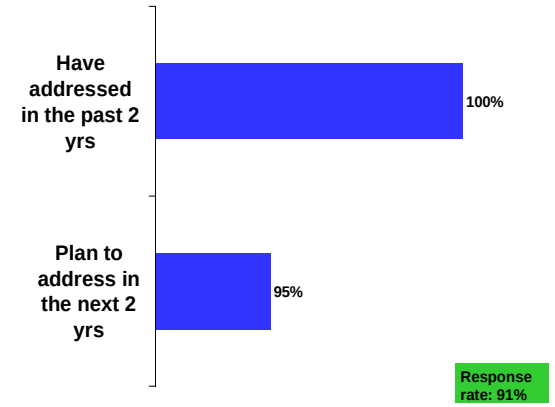
"Data touches everyone and anyone you talk to has data problems. It's an easy sell. It's hard to quantify what the data is costing you, though."
- US Sell-Side

The heightened importance of reference data has many saying "why now?" or, more cynically, "here we go again." The industry has acknowledged the troubles with reference data, seemingly without end for the past 20+ years, with little material change in process or priority. The cause of the problem was the industry's competitive drive to get technology operating quickly. As a result, many asset managers and brokers have a considerable legacy technology infrastructure that is difficult to change, upgrade and support. Why have today's brokerage firms elevated reference data management to a higher level of importance? The prominence of data quality enables an opportunity for competitive advantage, by promoting integration of product and client data, and by providing a greater depth of analysis to support operations such as risk management, trading analysis, and regulatory compliance.

"It's a driver of a tremendous amount of hidden costs"
- European Buy-Side

Brokerage institutions place great value on data accuracy and have intensified their efforts to maintain pristine data: the often-cited "golden copy." Indeed, reference data projects are in progress across the industry, as all firms have initiated projects in the past two years to address reference data management concerns (see exhibit 3). Further, 95% of the industry plans to initiate more efforts in the next two years to improve their reference data. These projects range from rationalizing the acquisition of data to streamlining the distribution process to perfecting data scrubbing. It is evident that, as institutions more aggressively attack the reference data problem, their end-to-end processes will improve.

Exhibit 3
Firms that have addressed / plan to address reference data



Source: TABB Group

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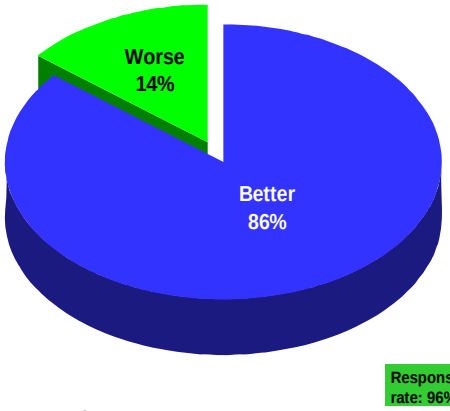
"I could give you a 10-year answer. It's getting executives to understand our operational risk."
- US Buy-Side

This renewed focus on reference data has had a positive effect on both its quality and process, as 86% of firms interviewed indicate that their process is improving (see exhibit 4). So the efforts are bearing some fruit and the data is getting better, which will catalyze upgrades in efficiency, promote lower costs, enhance client relationships, and allow for more effective risk management.

Exhibit 4
State of the reference data mgmt process



Source: TABB Group

Motivation for addressing reference data

"If the quality is better, there is less cleaning required and less overall work, which leads to cost reductions."
- European Sell-Side

Surely, the industry has been able to associate many of its ills—high costs, failed trades, lack of compliance, and poor risk management—to bad data. The incidence of failed trades and related inefficiencies accelerated the impetus for the industry's straight-through processing (STP) initiatives in the late 1990s. Poor controls contributed to the untenable operational risk scenarios that made the industry vulnerable to the scandals of Paine Webber, Barings Asset Management, and Long Term Capital Management among others. But is it fear of risk or something else that drives firms in this industry to address their reference-data issues?

No two concepts grab the attention of decision makers more than "improve performance" and "reduce costs." Every management team is seeking resources to help them reduce errors and operate more efficiently. While both buy- and sell-side institutions are motivated by a number of factors to improve their reference data, the prime drivers of these efforts are cost and efficiency (see exhibit 5). Just over one-quarter of respondents cited either cost or efficiency as reasons to fix their problems. Just like the adage that states that the way to a man's heart is through his stomach, the way to a well-managed firm's heart is through its bottom line; that means cost

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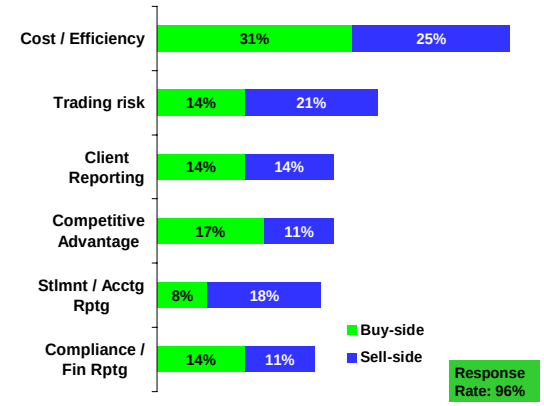
reductions and efficiency improvements. Since reference data is viewed as an operational or processing issue, its value is more often associated with cost and required processes than it is with revenue generation. Hence, firms that undertake projects to improve reference data believe that the payback will come in saving money, as opposed to increasing revenue.

"Inconsistencies have led to more bodies being thrown at the problem. Clearly bad reference data increases operational risk…if the instrument was settled & generated a loss of $1.6m on a $200m position, it's real money going out of the door."
- US Sell-Side

Further analyzing reference data challenges, cost and efficiency is critical to both buy-side and sell-side institutions. However, the buy-side cites competitive advantage as a primary driver for reference-data resolution, while the sell-side is more focused on trading risk. Since buy side firms have gained greater control of their trading, they seek to compete more intensely in the arena, not only with other investment managers but also with brokers. This drives their increased concern about data quality. In contrast, sell side firms have more far-reaching experience in trading and are more sensitive to accurately managing their trading risk, relying on reference data as a primary component of its derivation.

Exhibit 5
Why reference data problems should be a priority to fix



Source: TABB Group

Tools to drive reference data repair

While acknowledging the importance of cost and efficiency as drivers of reference-data improvements, securities firms use these twin factors to effect change in their institutions. Tools that highlight the inordinate and redundant costs or measure the processing and organizational inefficiencies are used by 60% of firms to motivate a change in methodology for addressing their reference data problems (see exhibit 6).

Historically, this line of discussion has only achieved marginal success. It's evident that cost and efficiency improvements might not be sufficient to motivate many institutions. Brokers, and more recently asset managers,

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"We're good at getting the initial capture of data, but when something changes, the maintenance and keeping up with changes is a challenge."
- US Buy-Side

are considerably more sensitive to revenue growth. Tell a trader that money can be saved and you might get a smile in return, but state that you can increase revenue and make trading more effective and you will get a budget to complete the project.

Exhibit 6
How firms are motivated to address their reference data needs

Source: TABB Group

Therein rests one of the main impediments to implementing large-scale reference-data projects in the past. Brokerage and asset management firms typically place lower priority on projects that address operations or cost savings than those that address the profit centers of the business. The experience of the recent past—where securities firms were laser-focused on growing revenue and were so profitable that the cost of bad data was less significant—fueled a culture that overlooked the state of reference data and minimized the importance of potential technology solutions to improve it.

Key Points

- Reference data projects are in progress across the industry, as all firms have initiated projects in the past two years to address reference-data management concerns.
- Brokerage institutions place great value on data accuracy and have intensified their efforts to maintain pristine data: the often-cited "golden copy."
- While both buy-side and sell-side institutions are motivated by a number of factors to improve their reference data, the prime drivers of these efforts are cost and efficiency.

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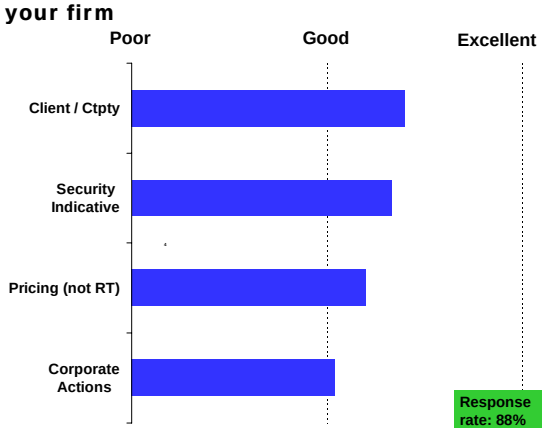
Data Quality & Process

When considering reference data, not all data or processes are the same. Most buy-side and sell-side firms acquire their data from a common data aggregator, such as Reuters or Bloomberg, and then manage and distribute the data internally to best fit their firm's needs. However, while the incoming data is often similar, every firm has its own unique way of selecting it, cleansing it, distributing it, and applying it to its operation.

"[Corporate actions] is a mess and should be remedied by someone. Why isn't this done already?"
- US Buy-Side

Brokers and asset managers are aware that, despite considerable efforts in the past twenty years, poor client and product data inhibits trading opportunities, exposes them to unnecessary risk, and creates potentially damaging regulatory scenarios. In previous times, the atmosphere was more forgiving, because the business was more complex, interrelated, and the technology to easily improve the data was simply not available. Further, generally low interest rates made the cost of financing these errors relatively small. In this industry environment, which is highly sensitive to regulation, trading effectiveness and risk assessment, all securities institutions now recognize that data quality is paramount. The industry now demands accurate and complete data sets and a consistent cleansing and maintenance procedure. As a result, quality and process act as the main catalysts for change.

Exhibit 7
The quality of the following sets of data in your firm



Source: TABB Group

Firms typically have client-related data, including information ranging from the clients' investment preferences, to relationships, to payment preferences and product-related data. Client data is almost always considered a firm's most highly sensitive dataset, because each firm maintains a unique and parochial set of information on each client and prospect, in addition to the common

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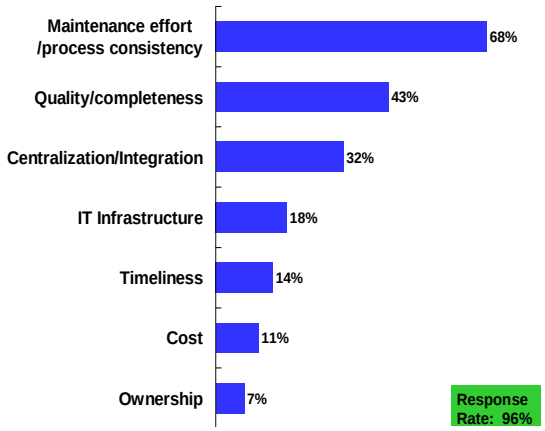
demographical data. Security-indicative data, which includes information on security identifiers, interest and dividend payments, critical accrual dates, and ratings for risk assessment, drives trade entry and processing. The securities firms we spoke with believe that the overall quality of their data is good, but rate their client/counterparty and security-indicative data as being of the best quality, and corporate actions as being of the poorest quality (see Exhibit 7).

"Our decisions are based on this! Bad data means bad results for us."
- US Buy-Side

When seeking to effect reference data change, those responsible for reference data highlight the inefficient processes and lack of data quality. Sixty-eight percent of institutions cite inefficient maintenance efforts and inconsistent processes, while quality and completeness of data and centralization of data were also leading concerns (see exhibit 8).

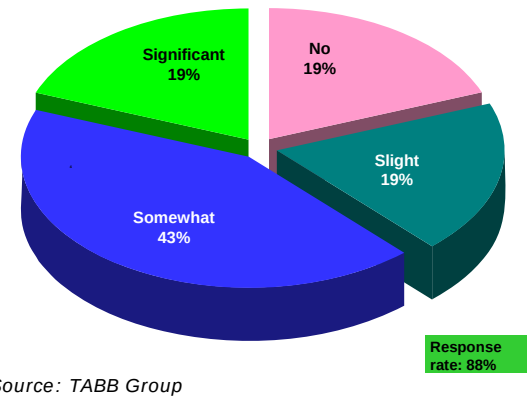
Exhibit 8
Major reference data challenges to your firm



Source: TABB Group

Knowing that bad data is at the root of so many problems, and draining so many resources, asset managers and brokers clearly focus on quality more than anything else. Data timeliness and technology infrastructure, while important, are deemed as secondary to the effort.

Exhibit 9
Severity of the reference data timeliness problem



Source: TABB Group

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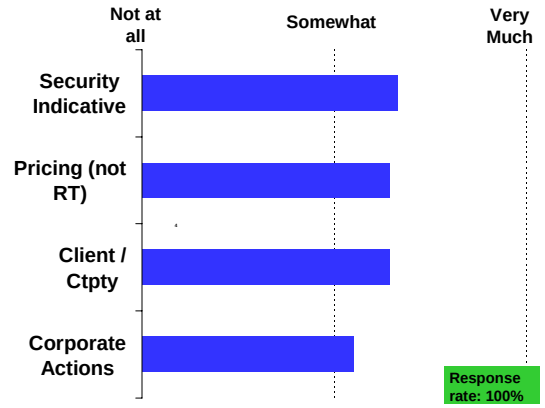
"Anything that would improve the effectiveness and the efficiency of the industry as a whole cannot be ignored! There is real materiality here! And there is real credit risk, market risk that is being impacted by bad market data."
- US Buy-Side

Timeliness, which has even more value in the new electronic trading environment, is not a noted problem. In fact, only one in five classified it as significant, while most characterized it as "somewhat" of a problem (see Exhibit 9). This is a trait of an industry that does not trivialize the importance of timely information, but acknowledges that reference data has other, more critical issues.

The Data Process

The data process consists of acquisition, distribution, cleansing and enrichment. Just as most firms have redundant data across their different business lines and organization silos, processes can also be inconsistent. The obstacles are the same, as the separate organization and technology structures sometimes inhibit uniformity of process. As you'd expect, inconsistency leads to unnecessary costs and the inability to identify bad data across the different segments of a securities firm.

Exhibit 10
To what extent is each of your ref data processes consistent across business areas?



Source: TABB Group

There is little consistency of data processes across the business because it simply has not been given a high enough priority in an environment that has historically been led by revenue-generating goals. Securities institutions have found it difficult to align these initiatives with a measurable benefit. The knowledge and leadership to set the right direction for process consistency has been just as hard to find, as few have implemented technology to either highlight or resolve these reference-data issues.

The reference data process is considered to be only somewhat consistent across each type of data (see Exhibit 10). Best practices have not been steadily put into place for any dataset. Data acquisition, the first and most basic step in the process, is the one for which most

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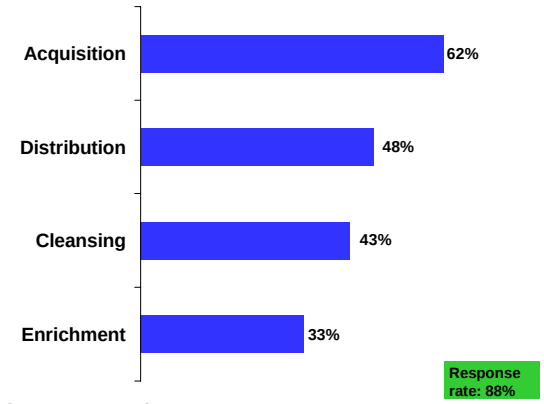
firms have focused on implementing best practices (see Exhibit 11).

Exhibit 11
Have you implemented best practices for the following functions?



Source: TABB Group

Since all securities institutions, regardless of firm size, strategy or approach, need to acquire data, most use a limited and defined number of providers. Nearly one-half of institutions have initiated best practices for the distribution of data throughout their firm, while slightly fewer have done this for cleansing and enrichment.

"It affects everything you do. Analytics, client reporting… if you don't have it right you're dead."
- US Buy-Side

Rationalization

The consolidation experienced by financial institutions since the 1990s has come through typically inorganic processes. Securities firms coming together created a condition at nearly every institution where the product and client data of one of the pre-merged entities is used independently (and redundantly) of those of the other pre-merged entity. Ideally, this problem would be remedied during the course of the internal integration projects, but in fact, it rarely occurs.

Instead, this series of mergers and acquisitions has led to the proliferation of multiple reference-data sets active in merged firms. It is not uncommon for a large broker/dealer to have security and customer data spread over as many as 75 databases within the firm. Consider the time and effort required to aggregate common data from these disparate warehouses to research a risk-management problem or prepare for a client sales call. Data providers do little to discourage this condition, because they generate significant revenue from selling similar services to multiple parts of an institution, made possible precisely because the of the organization's information silos.

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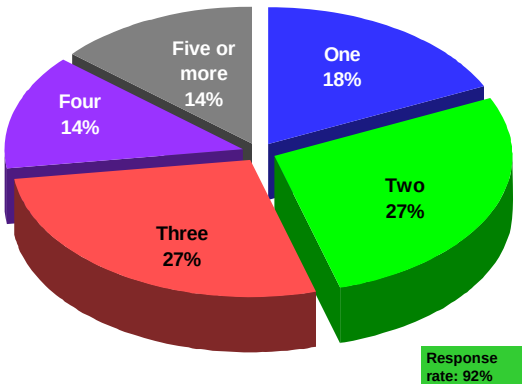
"People want to enjoy their day and not deal with processing headaches. Improving processing will surely improve customer relationships."
- US Sell-Side

In fact, the majority of firms interviewed have more than three different groups responsible for reference data within their organization, with some having more than five (see Exhibit 12). This structure has been effective for the individual silos because of the dedicated focus and more immediate response that each reference data management group offers to that business line. However, with so many different data sets holding essentially similar (if not identical) data—but in disparate formats—not only did reference data managers have an operational nightmare from the enterprise-wide viewpoint, but traders, risk managers, and client-services teams felt the pain of the resulting data inconsistencies.

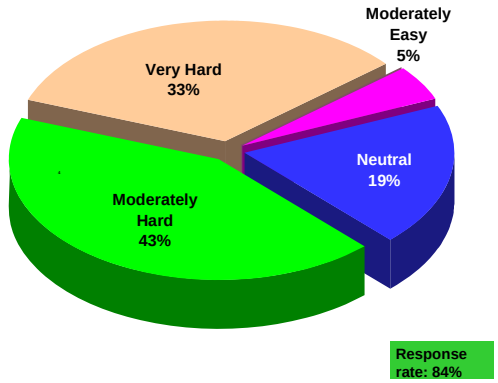
Exhibit 12
How many different groups in your organization are responsible for ref data?



Source: TABB Group

Although the industry has been targeting the data rationalization challenge for many years, it remains a significant impediment. Virtually every institution has initiated EDM projects over the past ten years to rationalize its redundant data feeds and sets, seeking to minimize its risk and cost of maintaining, updating and managing them.

Exhibit 13
Significance of rationalizing/cross-referencing reference data



Source: TABB Group

However, eliminating these redundancies remains challenging. Indeed, three out of every four respondents described cross-referencing data as either moderately or

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very difficult, while virtually none said that it is easy (see Exhibit 13). So it has become clear that, if securities firms are to resolve the cross-referencing issue, its degree of difficulty will make it a good candidate for an external specialty firm.

Key Points

- While in previous times in a more forgiving business atmosphere, this level of data quality was acceptable in this industry environment, which is highly sensitive to regulation, trading effectiveness and risk assessment, all securities institutions recognize that data quality is paramount.
- Client data is almost always considered a firm's most highly sensitive dataset, because each firm maintains a unique and parochial set of information on each client in addition to the common demographical data.
- Data timeliness and technology infrastructure, while important, are deemed as secondary to the effort to improve data quality.
- There is little consistency of data processes across the business because it simply has not been given a high enough priority.
- It is not uncommon for a large broker/dealer to have security and customer data spread over as many as 75 databases within the firm.

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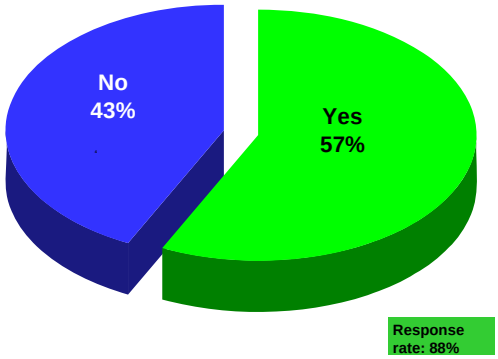
Current Infrastructure

Much of the core technology infrastructure in the industry has been in place for many years and, as such, is somewhat difficult to change. Since reference data is the most fundamental of processes, the bulk of firms keep it within this technology infrastructure. While this setup has been sufficient to support the business up until now, it is becoming evident that this may not be the case for long. In order to support the considerable growth in data volume and its renewed importance, securities institutions are evaluating their existing technology infrastructure to address both their current and their future requirements. While a majority believes that their current infrastructure is sufficient to support the projected two-year growth, 43% feel that they need to improve upon it (see Exhibit 14).

"...Because of disparate data, we are finding the need to aggregate to one platform so that we can tell what's going on."
- US Buy-Side

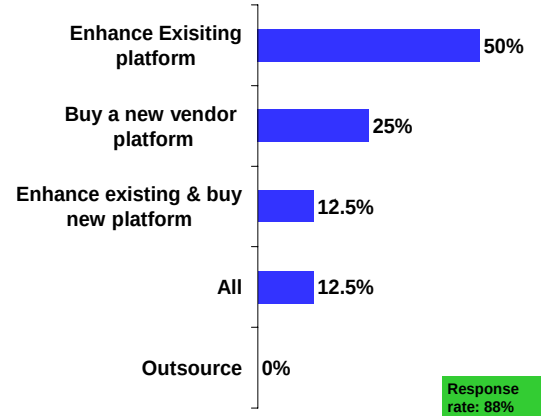
Exhibit 14
Ability of ref data infrastructure to handle business growth in the next two years



Source: TABB Group

The improvements to institutions' infrastructure are expected to come from adding to the firms' current platform. One-half of respondents plan to enhance their existing reference data platform to address their problems, while 25% will

Exhibit 15
If not, what do you believe your firm will do to resolve this problem?



Source: TABB Group

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"Everything we do is internally developed."
- US Buy-Side

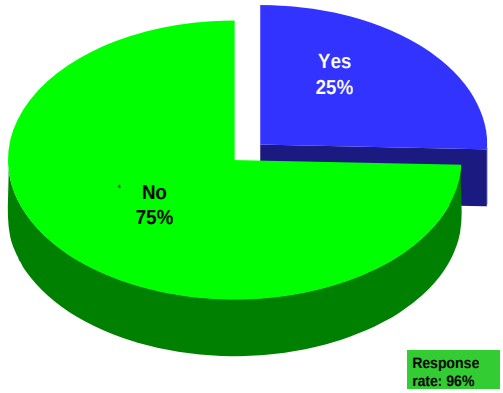
purchase a new platform provided by a third party (see Exhibit 15). These systems range from software to assist in developing the technology framework, to cleansing and enrichment tools, to full outsourcing solutions. Some firms will do both, not only buying a new platform but also enhancing their existing one, illustrating the commitment to improving the process and the recognition that technology is the primary solution.

Third-Party Platforms

TABB Group believes that most firms are not well equipped to support their future reference data-management needs. Data is simply more important, volumes are growing, and firms need to acquire and process this data faster than ever before. As a result, we expect the industry to place greater reliance on third-party providers of software, technology infrastructure, and staff resources to bring their capabilities to the required levels. The high profile of data management that is present in the industry today will offer great opportunity for these platforms to expand their presence, as securities firms struggle to build up their infrastructures to handle the expected growth.

"…It's only recently (since 2004) that we have had a site license and now it is the recommended model for NEW projects. It's only used in fixed income. The intention is to expand it to any new development."
- European Sell-Side

Exhibit 16
Use of a third-party EDM technology platform



Source: TABB Group

Securities institutions' internal technology is not sufficient to support their reference data infrastructure. Reference data demands have grown enough since the 1990s that some institutions have implemented third-party systems specifically designed to provide the framework and infrastructure to optimize reference data management (see Exhibit 16).

These technology platforms offer data models that provide consistency and structure to reference data, and enable improved integration of new internal systems and available external systems with legacy systems by

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promoting interoperability between disparate technologies.

Key Points

- While a majority believes that their current infrastructure is sufficient to support the projected two-year growth, 43% of respondents feel that they need to improve upon it.
- One out of four institutions has implemented third-party systems specifically designed to provide the framework and infrastructure to optimize reference data management.
- The industry will rely more heavily on third-party providers of software, technology infrastructure, and staff resources to bring their capabilities to the required levels.

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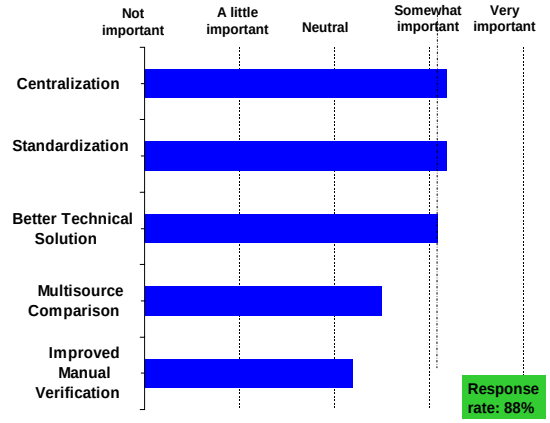
Centralization and Standards

"No one provider seems to provide the best data, therefore you have to go to various vendors, which then creates the challenge to integrate all that data."
- US Sell-Side

The fragmented institutional organizational structure of data management and the multiple naming conventions and security identifiers so prevalent in the industry have created obstacles to improving reference data. The product silos that define the way brokerage firms have been aligned in recent times have led to the existence of multiple data-management groups, uncoordinated procedures, and distinct datasets. In fact, it is common for each of the equity, fixed income, and derivatives businesses to maintain their own client and product data, no doubt expanding the redundancies and inefficiencies seen in most firms today. This is exacerbated by the existence of separate business entities that now are common within the large multi-entity securities firms today, in some cases creating more than one equity or fixed-income business line within the same corporate organization. These separate groups of data frequently exist in multiple architectures, making them extremely difficult to integrate. However, given that the siloed organization is entrenched in this industry, how do securities institutions turn it around and achieve a more efficient data management solution?

Institutions recognize that they need to improve the quality of their reference data and the critical role that centralization and standardization play in the process (see Exhibit 17). The origin and use of data is in many ways quite diverse, depending on the type of asset and firm, so the way in which data is acquired and distributed will at times naturally differ. The source of indicative data for Japanese equity securities will logically differ from that of US corporate bonds, as will the information required for customers of the retail

Exhibit 17
Most important factor to improve data quality



Source: TABB Group

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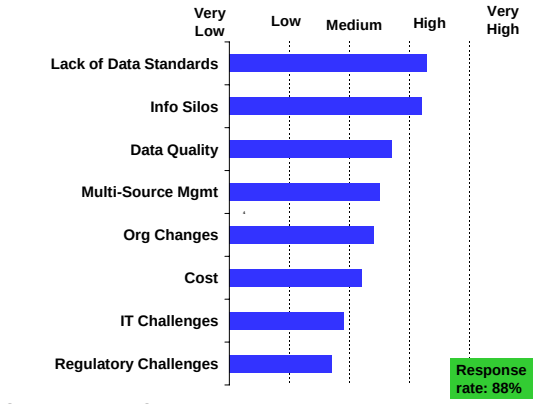
and institutional parts of a business. However, many of the data feed mechanics, maintenance, cleansing and distribution processes can follow similar core processes, regardless of the end users' purpose. This is what centralization and standardization are all about.

Best Practices

Because so many in the industry understand the importance of consistency to the process, much of their current efforts center on implementing best practices for the reference-data process. While many have achieved some level of success, it has not come without considerable struggle. Indeed, the greatest barriers to reaching their goals are the lack of data standards and existence of information silos within the organization (see Exhibit 18). While respondents rate the severity of these impediments as "high," others, such as regulation or technology challenges and even cost, are perceived as having only low or moderate effect.

"Consistency of standards across all sources & asset classes is a major problem. This hasn't changed in all these years."
- US Sell-Side

Exhibit 18
The severity of impediments to implementing ref data best practices



Source: TABB Group

"Best practices" is a term that encompasses a wide swath of functions. With data management budgets still lagging behind those of more prominent, revenue-generating efforts, securities firms are faced with significant resource-allocation decisions. Although a problem may cause a great deal of pain, it might not coincide with the area that will reap the most benefit for the cost. While integration may be an obvious obstacle, one dollar spent there may have less influence than if it was directed to improved centralization. However, integration efforts for these systems are often quite complex, gobbling up resources focused on data conversion and normalization within multiple platforms and operating across self-contained information silos. This makes data integration a very unpopular and difficult project to successfully

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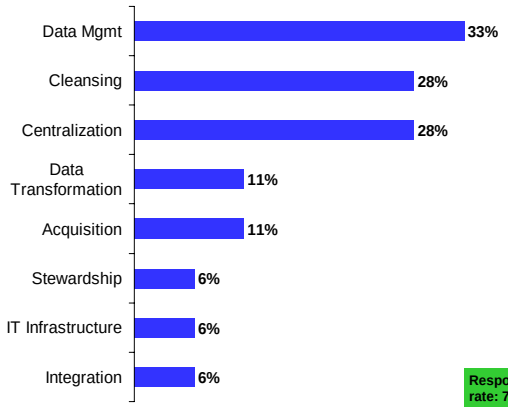
complete or even attempt. Given the challenge posed by data integration, where should brokers and investment managers direct their efforts to achieve maximum return?

"There's always a faction of people that don't focus on these standards, even though they probably know that it's the right thing to do for the industry. But, they just don't want to change the way things are. If we could get some momentum in the industry towards standards, we'd move a long way towards improving the process."
- US Sell-Side

Both buy-side and sell-side institutions expect to invest the bulk of their data budgets on maintenance-related issues. Management of reference data includes the entire value chain, from cleansing to centralization to technology infrastructure. The outlays for overall data management, cleansing and centralization clearly eclipse those for other aspects of the process (see Exhibit 19).

Exhibit 19
Areas of expected investment data-related expenses



Source: TABB Group

Managing the process and performing the necessary maintenance includes developing a structure for storing and normalizing the data, overseeing the processes, and scrubbing the data in such a way as to prepare it for its unique use by that firm. These functions not only consume the most time, but they are recognized as the most important factors in creating data that is not only the most accurate possible, but also the best fit within the guidelines of any firm's business needs.

The Centralized Organization

The organizational structure of firms in this industry has been an issue for many years. Right from the start, companies have been set up along asset-class lines, which differentiated the fixed-income business from the equity business. Clear job functions, reporting lines and compensation arrangements—and in many cases legal business entities—have been established accordingly, cementing these silos into the corporate culture. While the siloed structure has served these ends well, it is now being blamed for many of the ills that plague the technology-laden global environment we have today, particularly with respect to data management. As a result, centralizing the data management organization has become an important topic.

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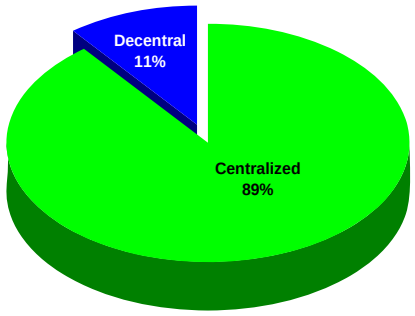
"We need industry standards, and the only way to do it is with an industry-wide solution. That's what it is, really. I'd love to see it."
- US Sell-Side

A centralized management structure can make the operation more efficient by consolidating both the processing and distribution of reference data. Further, a single source of data will also improve quality by eliminating the interrelated references so common today, while duplicative efforts—and associated costs—are removed. Not surprisingly, an overwhelming majority of firms feel that a centralized organizational structure is the best one for managing their data. In fact, 89% of respondents prefer this to a decentralized environment (see Exhibit 20).

Exhibit 20
The best organizational structure to achieve high quality reference data

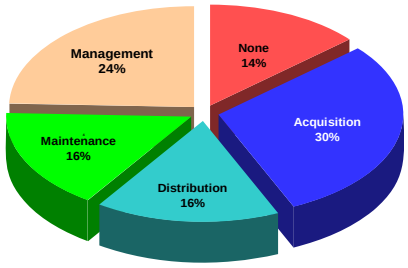


Response rate: 76%

Source: TABB Group

Nearly one-third of respondents have centralized the acquisition of data, while 24% have centralized general data management (see Exhibit 21). Since acquisition typically originates with only a few sources and is the most basic data function, it is the easiest of the processes to centralize, using common data feeds and protocols. In contrast, as the processes become more complex, the efforts to centralize them grow more difficult. A small percentage of firms have centralized the distribution and maintenance functions, which entail more subtlety and

Exhibit 21
Functions for which reference data responsibilities are centralized



Response rate: 100%

Source: TABB Group

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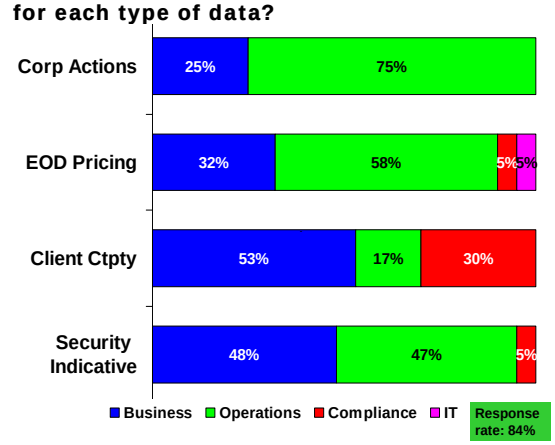
involve more details that are specific to the data's end users.

Responsibility for each separate data process is one aspect of centralization, while ownership of the distinct datasets is another. In fact, one of the major obstacles to centralizing data is that different types of data should logically be managed by different areas within the organization, depending on their relevance. Because the criticality of data differs between groups within the organization, many feel that the responsibility should align with the importance. Institutions feel that, while client data should be managed by the business, operations should have responsibility for corporate actions data and end-of-day pricing (see Exhibit 22).

"I need to change the mindset so they acknowledge that it's not just an IT solution, but instead is a process of using the business standards and defining what they need and what problems exist, and then backing into it."
- US Sell-Side

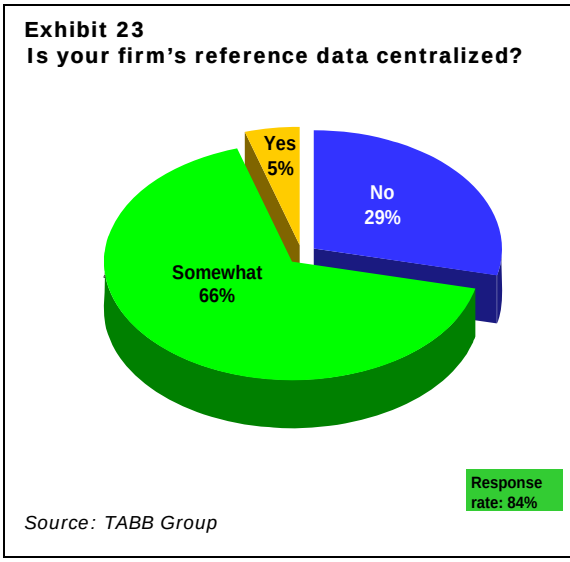
Exhibit 22
Where should management responsibility lie for each type of data?



Source: TABB Group

Responsibility for security-indicative data is split nearly in half between the business and the operations. Since clients interact primarily with the business side of a securities firm, the logical responsibility for the client data—much of which is unique and proprietary to each specific institution—should remain with that same business group. Security-indicative data, which includes identifiers, payment structure, and

Exhibit 23
Is your firm's reference data centralized?



Source: TABB Group

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"You catch a problem and you fix it, but there are no set standards."
- US Buy-Side

"There are pseudo-standards to regulatory requirements, but no standards for data feeds or file formats or anything else… no policies on a global basis across all divisions…there is all manual look up. People don't know the scale of the inconsistency and in a lot of cases they don't worry about it."
- US Sell-Side

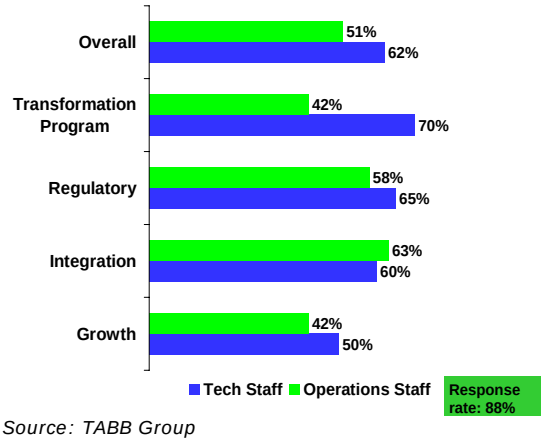
issuance-related information, is of equal importance to both the front-office business, which uses the product data for trading purposes, and back-office operations, which bases clearance, settlement and payment processing on this information.

Despite the preference for a central structure, a de-centralized data set-up is the norm in the industry. Most firms fail to maintain a common, central warehouse for reference data, instead managing it in multiple databases in a fragmented manner. Just 5% of firms have a fully centralized reference data structure, maintaining all of their data in a single depository (see Exhibit 23). When it comes to a central repository, oftentimes an institution's technology department—not the business side—wields the greatest influence. Conversely however, the business is more likely to be the best manager of this data, which is one of the things that inhibits adoption. This leaves nearly the entire industry to manage data in a decentralized manner, which contributes to data inconsistencies, additional maintenance, higher costs and the need for more staff.

Staffing: Business and technology

Reference-data management has very much become the responsibility of both the business and technology. The acquisition process is dependent on acquiring data via direct feed and processes to scrub the incoming data. Maintenance is affected by people using programs to provide metrics to identify the error rates and patterns, while distribution is automated to expeditiously deliver the right data to the right business areas. As a result, the resource allocation for reference data-related functions has changed regularly for most firms, shifting between different areas of the business and between the business and technology groups.

Exhibit 24
Sufficiency of staffing levels to achieve its reference data objectives



Source: TABB Group

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"The maintenance and keeping up with changes is a challenge"
- US Buy-Side

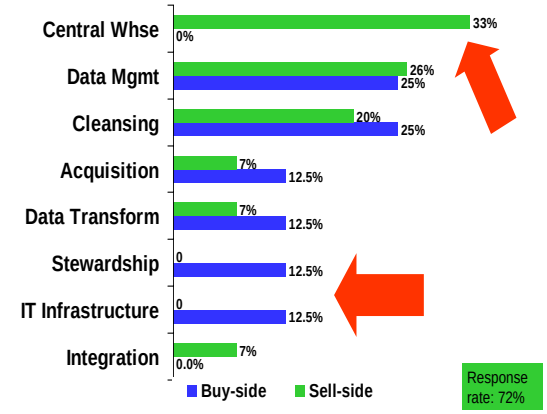
However, regardless of which group owns the data process, most securities firms feel that their staff resources could use improvement in order for them achieve their reference-data objectives. Overall, just over half of firms feel that their operations staff is sufficient, while 62% express satisfaction with the size of their technology resources (see Exhibit 24). Although the majority of firms believe their staff is sufficient, this is actually an indication of the industry's dissatisfaction. In fact, few organizations would operate effectively if only one-half of them had sufficient staffing. When breaking down each function, brokers and asset managers are most satisfied with the level of technology resources addressing their transformation program and least satisfied with the size of their operations staff to support their growth.

Investing in reference-data initiatives

"Only by having that standard can you apply any cleansing or any form of system validations, versus looking at the data multiple times at multiple places."
- US Buy-Side

Senior managers of reference data believe that given the growing reliance on, and importance of, technology in the management process, their firms have neglected the human aspect, swinging the pendulum too far toward IT. If the need for accurate data and efficient process remains in line with the projected growth, more resources—and a more effective allocation of these resources—will be needed. Along the same lines, the industry's recognition of the growing importance of reference data is leading to a more judicious allocation of their budgets. Since the sell side has had more experience managing data internally, brokerage institutions acknowledge their need to bring their data together in a centralized structure more than do asset managers (see Exhibit 25). In contrast, the buy side's lack of

Exhibit 25
Buy-side vs. sell-side expected investment in ref data initiatives



Source: TABB Group

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experience maintaining control of their own data will lead them to invest resources in building up their technology infrastructure and in stewardship of its management.

The greatest share of the industry's EDM budget will be directed toward cleaning their existing data to ensure its accuracy, as many data users believe that diligent scrubbing offers them a true competitive advantage. Conversely, just one in ten firms project spending their reference-data budgets on acquisition, which is the most fundamental and least complex process, and fewer than that will focus their budgets on IT infrastructure, integration and stewardship of data, as these functions represent less critical aspects of their operation.

Key Points

- The product silos that define the way brokerage firms have historically been aligned have led to the existence of multiple data-management groups, uncoordinated procedures, and distinct datasets.
- Most firms believe that centralization and standardization are the factors posing the greatest challenges to improving data quality.
- Integration efforts are often quite complex, making it a very unpopular and difficult project to successfully complete or even attempt.
- Both buy-side and sell-side institutions expect to invest the bulk of their data budgets in maintenance-related issues.
- An overwhelming majority of firms feel that a centralized organizational structure is the best one for managing their data, but a de-centralized data set-up is the norm in the industry.
- Most securities firms feel that their staff resources could use improvement in order for them achieve their reference-data objectives.

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Measuring Effectiveness

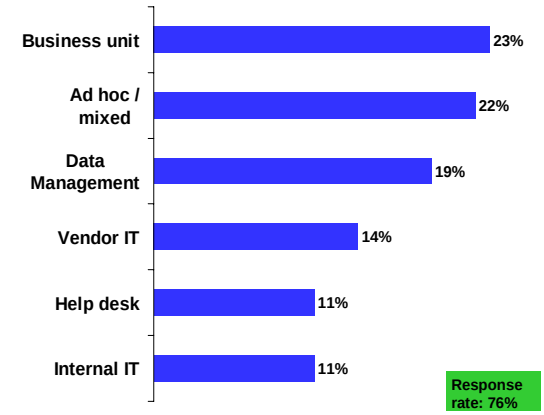
The industry's awareness of reference-data inaccuracies and inefficiencies has catalyzed its efforts to adopt best practices, allocate resources, and seek alternative solutions to improve processes. While it is clear that the majority of firms have active programs to address their reference-data issues, it is far less evident that their respective means of assessing this is consistent or even adequate. How do we really know how good our data is? How efficient is one firm's distribution process vs. another's? Most firms will admit to believing that their reference-data management is getting better, but do they have any proof? The methods by which the securities industry assesses, records, and analyzes the quality and process related to reference data will go a long way toward adopting a remedy for its ills.

"There isn't a formal process. It is pretty ad-hoc. If the CTO or VP of Ops can handle it, then they will fix it."
- US Sell-Side

"Gotta fix it! Escalated and communicated from/to respective business units."
- US Buy-Side

Predictably, the process for reporting and addressing reference-data problems is haphazard across the industry, dependent somewhat on the type of firm and the type of problem. This is underscored by the response that 22% of firms have an "ad-hoc" or "mixed" procedure (see Exhibit 26). For instance, for a small agency broker that does not maintain its own data, the approach is based on the implied severity of the problem, combined with whether or not there is an immediate impact on their client's business. Conversely, the largest and most structured broker/dealer is more likely to implement strict step-by-step instructions through its data-management department or help desk to triage, record and escalate the issue, regardless of origin. The business unit is responsible for reference data problems 23% of the time, most often when customers are impacted, and that group has the most important and frequent client interaction.

Exhibit 26
Responsibility when there is a reference data problem



Source: TABB Group

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"Operations teams use a daily control process. It could be related to a holding or a security-master issue or trade instruction."
- US Buy-Side

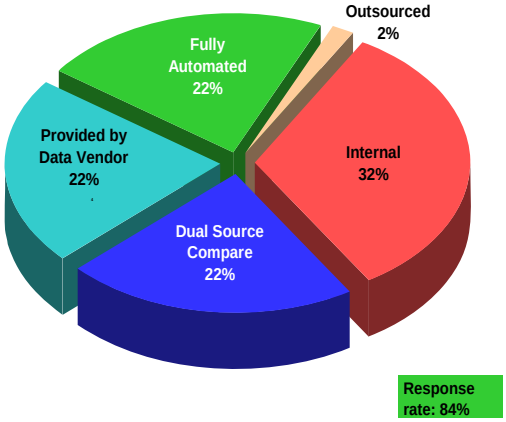
"It would be impossible to keep count of errors resulting from vendors"
- US Buy-Side

Technology has assumed a prominent role for reference data, as with so many other critical brokerage functions. So many firms rely on external technology to provide and maintain their data structures that 14% of companies hold the vendor responsible for the remedy. A similar number of respondents direct issues to their internal IT group for diagnosis and resolution, using the strength of technology to find and repair any problems. So although the existence of problems with reference data is widely recognized throughout the industry, there is no consistent process for monitoring and repairing them.

Verifying and Measuring Data

Not only is the responsibility for assessing and managing problems inconsistent, but so too is its verification. Firms have no reliable method for verifying their reference data. One-third of respondents used a manual internal review, where the groups responsible for the data checked for inaccuracies (see Exhibit 27).

Exhibit 27
Data verification process



Source: TABB Group

On the other side of the coin are the firms that provide a fully automated toolset for verifying the accuracy of their data. These tools are comprised of various metrics that compare datasets against pre-set tolerances, historical records, and known trends to weed out the outliers.

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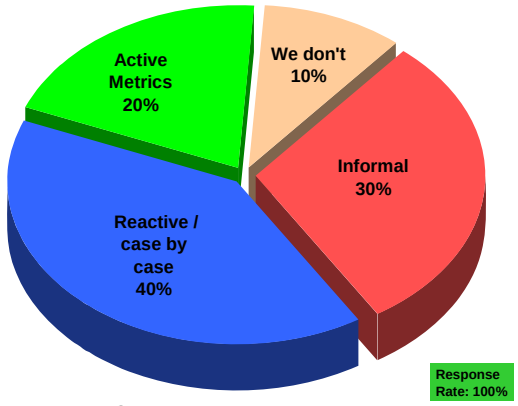
However, few institutions use metrics to measure the effectiveness of their reference data, relying instead on reactive and informal processes. Nearly one-third of all respondents have no method to measure the effectiveness of their data (see Exhibit 28). This lack of formal methodology is a hindrance to reaching any real measure of improvement, as not only does it impede the progress on an industry-wide basis, it also leaves the internal evaluation in the hands of someone's personal recollection of problems. Many firms also use informal methods of measurement, characterized by their memory of how many times they were notified by a client or internal staff of a problem.

Exhibit 28
Managing / measuring the effectiveness of your reference data



Source: TABB Group

"By how many complaints we get! – if it does a good job I get no complaints; if it doesn't, I'll get many complaints."
- European Buy-Side

Most asset managers and brokers followed a reactive, or case-by-case, means, whereby problem logs are recorded and accessed, but no predictive analysis is done to ease the repair process and avoid future occurrence. Just 18% of firms manage the effectiveness of their reference data using active metrics to assess problems and predict and prevent their recurrence. Without a greater commitment to formal metrics as an active tool for improving data quality, the industry is unlikely to significantly improve the outstanding reference data problems.

"We have a gap there, and have poor metrics around it."
- European Buy-Side

Justifying Initiatives

With so little controlled and formal measurement of the quality and effectiveness of reference data, it's no wonder that institutions have not been successful in resolving their reference data projects. The current industry environment requires solid, reliable metrics to justify most major project efforts. One-quarter of firms in the industry have not done anything to justify their initiatives (see Exhibit 29). In order to support their reference-data decisions, firms in the industry highlight quality and cost efficiencies that result from these efforts. Twenty-six

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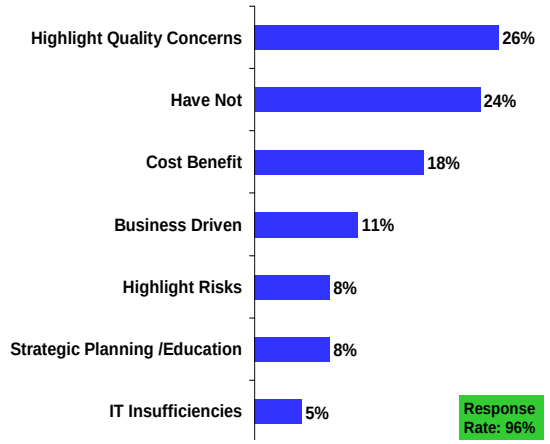
"There are no metrics at all. It ripples downstream 2 or 3 levels, until it reaches the people who feel the pain. …They clean things up in their own world, which causes a problem. It's a pure operations function. It's not treated as important. There is a bit of disconnect. This is a problem when you are keeping a seven-year history and things don't match in the systems when they are aggregated!"
- European Buy-Side

percent of firms justify their initiatives by citing quality concerns, and 18% perform cost-benefit analysis to accomplish the same.

Why the lack of justification? TABB Group believes that brokers and investment managers are now committed to repairing the long-standing reference data problems, but they simply do not have or cannot find effective enough metrics to offer them reliable justification. Once the industry can adopt standard metrics, justification will logically follow.

Exhibit 29
Justification of reference data initiatives



Source: TABB Group

Key Points

- The process for reporting and addressing reference data problems is haphazard across the industry, dependent somewhat on the type of firm and the type of problem.
- Firms have no reliable method for verifying their reference data: nearly one-third of all respondents have no method to measure the effectiveness of their data.
- One-quarter of firms in the industry have not done anything to justify their initiatives.

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"It seems that when anybody offers this service, they have all sorts of disclaimers that say they are not responsible for the absolute accuracy of the data. That means I still have to do all the work. It means that if there's a problem, I can't come after them, and then I still have to scrub it!"

- US Buy-Side

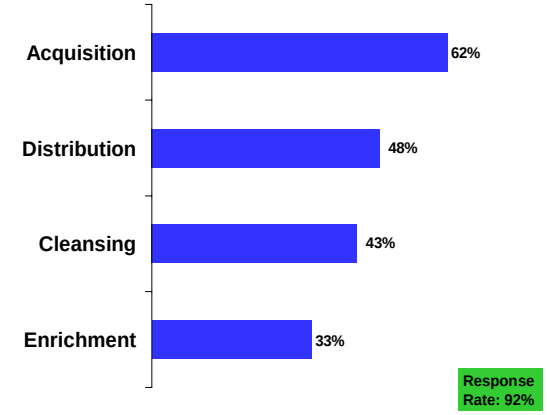
"The only way to do it is with an industry wide solution. I'd love to see it."

- US Sell-Side

Outsourcing

Although institutions long ago identified their problems with reference data—and have addressed them mainly from within—their extensive initiatives have not provided a lasting remedy. While improved, many of the challenges they face today—poor quality, redundancy, bloated processes—are the same as existed back then. Today's unforgiving pace and closely-watched budgets create an even less-favorable environment for future reference data projects taken on from within these institutions. With internally sourced efforts, best practices have been implemented far less regularly than might be expected. The most critical functions such as data acquisition and distribution have achieved best practices only 62% and 48% of the time, respectively. Further, both buy-side and sell-side institutions highly value data cleansing, but despite this recognition of value, just 43% of firms have successfully implemented best practices for data cleansing (see Exhibit 30). Certainly, none of these figures represents a particularly high level of success.

Exhibit 30
Have you implemented best practices for any of these functions?



Source: TABB Group

Data management has become more diligent and data quality has improved, but at great cost. Many institutions have managed their reference data internally, using large staffs to acquire, cleanse and distribute it, but it's become clear to them that much of the data is common to all firms, making their use of internal resources inefficient. Drawn in by some new product offerings, many of these same institutions are now considering outsourcing as a solution to their reference-data management. Indeed, nearly one-half of institutions believe that there should be an industry-wide solution to their reference data problems and another 33% feel that there "probably" should be one (see Exhibit 31).

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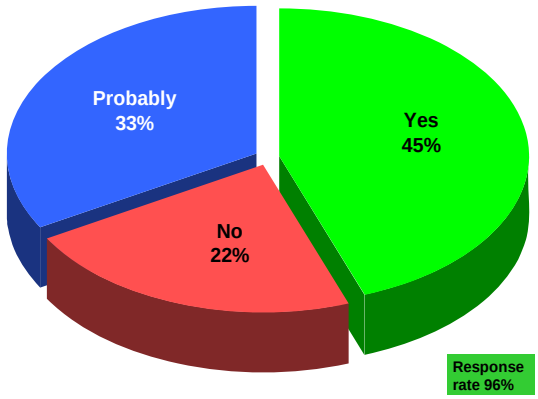
"I don't think it's a solution that is realistic. It has never worked in the past."
- US Buy-Side

Looking further into this, *every firm* expressed positive feelings about an outsourced solution. Forty-one percent of these firms believe, with some reservations, that an effective outsourced reference data solution would be good for the industry, while the remaining segment believe this *without* reservations (see Exhibit 32). The industry knows that much of this is commoditized and is undoubtedly open to the concept of giving up at least a portion of its reference data-management responsibilities to an external, managed reference data service.

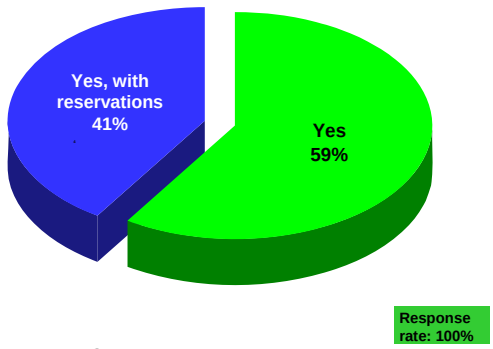
Exhibit 31
Should there be an industry-wide solution to reference data problems?



Source: TABB Group

"So which part of the puzzle will you help me reduce? Will you help me reduce my feeds? Will you help me reduce my customized solutions for the client? What are you going to provide to me that I don't have today, and what can I eliminate?"
- US Sell-Side

Exhibit 32
Would an effective outsourced reference data solution be good for the industry?



Source: TABB Group

Despite this acceptance of an effective outsourced MRDS, there has been little actual adoption by the industry. It's not for lack of interest. One shared outsourced service, known as EJV, was launched to support fixed income data in the late 1980s to make the best use of each participant's data and the entity's economies of scale, but after a few years it failed to deliver on its promises. Contributing factors ran the gamut from technological shortfall, to lack of commitment to poor group management. The experience left a sour taste in the mouths of many of the participants, but there have nonetheless been routine attempts to develop other

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"Don't discount the sheep factor. All of us will follow the shepherds. If we discover that our competitors are outsourcing this, I know I'll hear from the most senior management that we should be doing this too! They won't admit it, but it's true."
- European Sell-Side

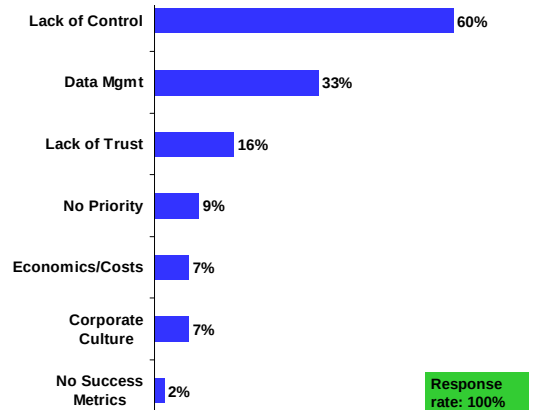
"It's such an intangible beast! The variety of stakeholders makes the successful implementation difficult."
- European Sell-Side

outsourced solutions, varying in style from ASP to shared service to BPO to a hybrid of external and internal.

One current MRDS that has had some success is DTCC's Global Corporate Action Validation Service (GCA), which manages corporate actions announcements through a centralized infrastructure. GCA began operation in 2003 and is presently used by bulge bracket brokers such as Credit Suisse, JP Morgan Chase, Merrill Lynch and UBS. While GCA has yet to achieve broad, industry-wide usage, the ability of major industry brokers to cooperatively participate and benefit from this shared service model offers one illustration in the industry's ability to overcome the challenges of this model.

The majority of institutions fear losing control of their data management process (see Exhibit 33). Data managers express a lot of uncertainty about the outsourcer's response rate in the event of a critical problem and about the outsourcer's ability to add value to the data. Since ultimately, the heads of data management hold responsibility for the accuracy of their data, they are insecure about giving up a portion of the daily tasks to a third party. That lack of trust in an external influence was noted, but what may be more insightful is the insignificance of cost in the equation. Again, we can be confident that the industry has progressed to the point where the importance of data—and the cost of bad data—is well recognized, and that the absolute cost of the available outsourced solutions is worth the reward.

Exhibit 33
The main impediments to outsourcing reference data



Source: TABB Group

The Outsourcing Choice

This new openness to outsourcing represents progress within the industry: progress in understanding the importance of data to their success, progress in accepting

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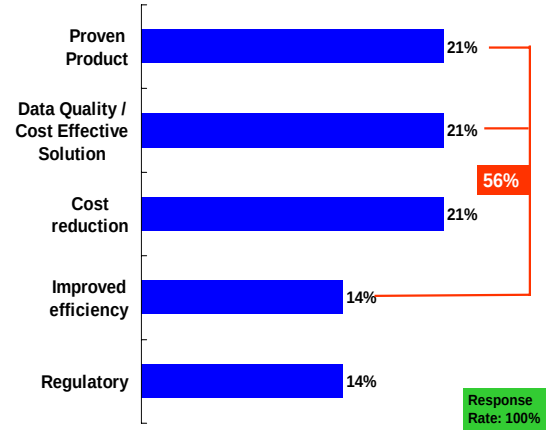
"We'd save money, but I don't believe we can agree on one way to do things. These kinds of things have failed in the past. But I guess it would be ideal."
- European Sell-Side

"Reduce the amount of scrubbing we have to do internally. If it's better or cheaper, it's not like it's already expensive, so if I can get more accurate, timely data at a reasonable price, [I'd do it]."
- US Buy-Side

that internal solutions may not be the most effective use of their resources, progress in valuing the scale and intelligence offered by a dedicated shared service or utility, and progress in having confidence in the available potential external answers. However, despite this opportunity, outsourced solutions remain far from having critical mass. If the concept of outsourcing is viewed positively, then the reason it has yet to take off may in fact rest with the offerings.

Outsourced services encompass "on-site" or "ASP" solutions, where a third-party provider assumes responsibility for the entire data-management technology effort. Another variation of this is the BPO, or "lift-out" model, where the reference data staff is actually taken over by the outsourcing organization to execute the required processes. More recently, hybrid solutions have been introduced. These systems operate primarily on a one-to-many basis to maximize economies of scale. Typically, they manage the feeds of incoming data from all available sources, perform a level of scrubbing, enrichment and rationalization on that data, and then direct the same copy of clean data to all of their clients. Upon receipt, each individual customer can then further enrich the data to add its unique competitive advantage to best fit its internal needs.

Exhibit 34
Catalysts for outsourcing data servicing



Source: TABB Group

Buy-side and sell-side institutions would be significantly more drawn to outsourcing if they had more verifiable metrics to evaluate the providers' offerings. If outsourcing providers could clearly prove the ability of their products to raise the quality of data and offer cost-effective solutions that improve data efficiency, firms would be much more likely to implement such a service (see Exhibit 34). Further, when identifying those factors

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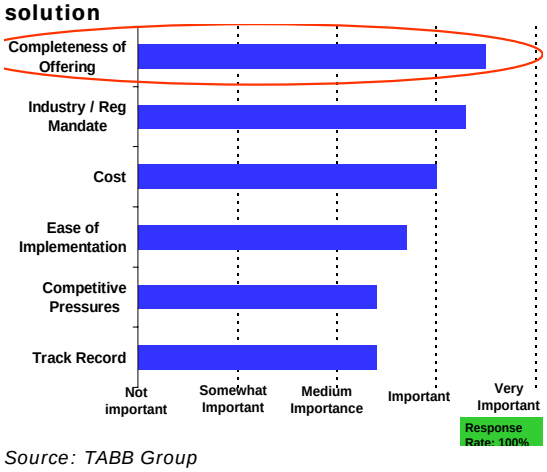
that would lead them to adopt an outsourced solution, again the institutions refer to the capabilities of the solution, as their completeness is cited as the most important factor (see Exhibit 35). Regulatory mandate, cost and ease of implementation are also believed to be important to firms when evaluating an outsourced solution.

"Everybody does everything so differently – your analytics...the efficiency - that it's part of your competitive advantage to manage this yourself."
- US Buy-Side

Exhibit 35
Factors leading you to adopt an outsourced solution



Source: TABB Group

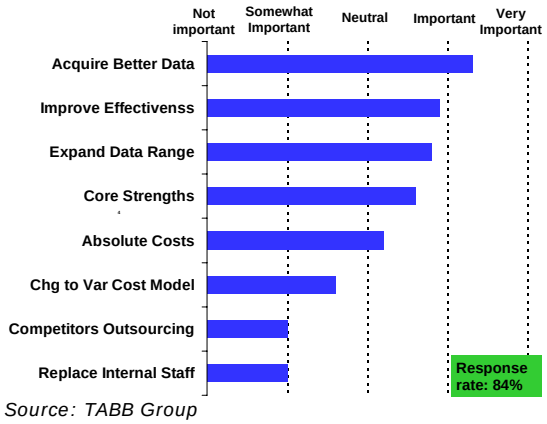
Improved Data

The industry is making a statement; one which comes down as a challenge to those proponents of outsourcing reference data. "Show me a service that gives me confidence that my firm will acquire better data over an expanded range of products and geographies, and that my process efficiency will improve, and I will consider giving up some of the internal processes to an external provider" (see Exhibit 36). To be sure, securities institutions are assessing all available options in search of getting better data.

Although the industry is in search of the "golden copy"—the holy grail of data—it is not that simple, because all data is not created equal. By nature, product-related data (security-indicative, EOD prices, and corporate actions) is managed in a very different manner from client-related data. Product data contains more elements that are common

"It would be great – but it's pie in the sky."
- US Sell-Side

Exhibit 36
The importance of issues influencing your outsourcing decision



Source: TABB Group

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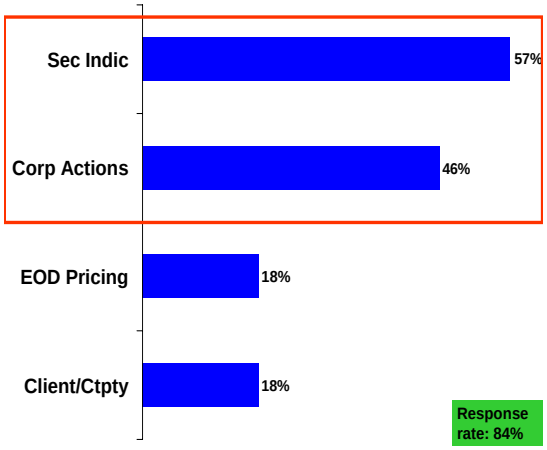
to all of its users, and therefore institutions have fewer areas where they can add value. Client data, on the other hand, includes many aspects that are germane to the user firm. Whereas basic client demographic information, clearing banks, and industry segmentation may look the same to every firm that services it, the sales process leads each brokerage institution to maintain its own profiling and targeting information—unique to them—that provides them with a perceived competitive advantage in the business.

"We've invested significant amounts of money in the past to try to do collaborations, and we are tired of that."
- European Sell-Side

Outsourcing different data types and processes

Few firms are considering outsourcing client or counterparty data, while believing at the same time that product and corporate actions data can be effectively outsourced (see Exhibit 37). In fact, just 18% of firms feel that client data can be outsourced, but 57% have a positive feeling about security - indicative data and 46% feel the same about corporate actions. This has been one obstacle in the outsourcing paradigm. Many firms believe that outsourcing is an "all-or-nothing" proposition. Either you outsource ALL of your reference data (product and client) or none of it. As solution providers promote their capability to accept any type of

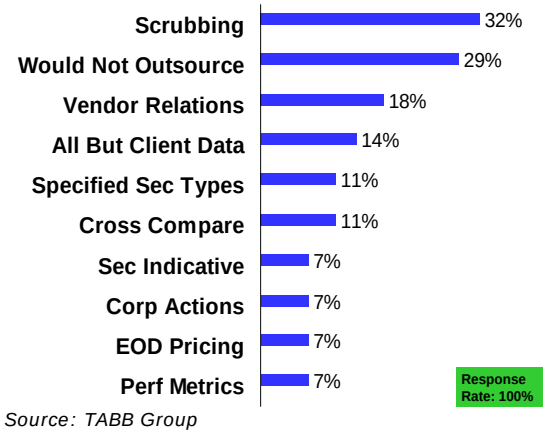
Exhibit 37
Outsource-ability of different data types



Source: TABB Group

"Anything that improves the process [I would consider]. I might be apprehensive of client stuff, but overall I'd be open to most of this"
- US Sell-Side

Exhibit 38
Parts of the reference data mgmt process that firms would outsource



Source: TABB Group

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data independent of others, the movement to outsourcing will grow.

"I'd be willing to be one of the first on the bandwagon. I think it's a viable alternative. We need to accept these kinds of solutions if we're ever going to make any progress."
- US Sell-Side

Not only does outsourcing differ for data types, it also differs for data processes. Just as a securities institution wants to direct the kind of data it chooses to outsource, it too wants to select the specific processes that an external service executes on its behalf. While performance metrics might be proprietary and considered to provide an institution with a competitive advantage, other, more-commoditized functions are more appropriate for outsourcing. Securities firms mention their desire to outsource data scrubbing 32% of the time—the most popular process to outsource (see Exhibit 38). Vendor relations were also cited and, highlighting the sensitivity of customer information, 14% of firms believe that they would outsource everything ***but*** their client data.

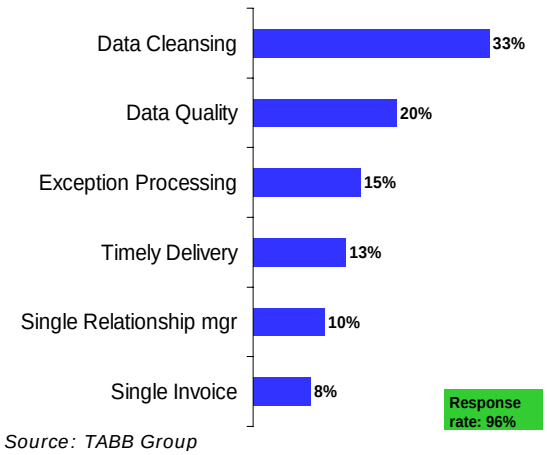
What makes a good outsourcing provider?

With the institutions' generally positive outlook on outsourcing, it could be inferred that the only obstacle standing in the way of a reference-data outsourcing trend is the absence of providers that inspire the industry's confidence. What do securities firms want in an outsourcing provider? What skills and characteristics should an effective supplier of these services have?

"The outsourced solution is not an out-of-the-can service. There is no benefit to this kind of service."
- US Buy-Side

First and foremost, 33% of securities institutions say that the most important skill sought in an outsourcing provider is data cleansing (see Exhibit 39). Firms in the industry expend a considerable number of resources on cleaning the data that they acquire to make it as accurate and reliable as possible. This is a costly process, and many firms don't believe that they can do it as well as a third-party solution that has greater time and focus. The second

Exhibit 39
The most important skills for a reference data outsourcing provider



Source: TABB Group

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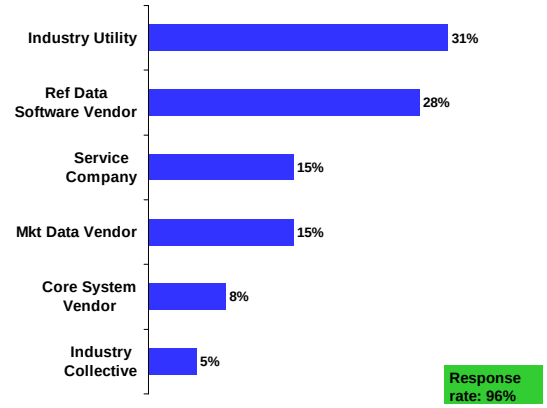
"The extent that it is used internally to support decision-making, portfolio management style, attribution, anything that a firm might use for competitive advantage would likely not be a good candidate to outsource. Besides, the centralizer would have a hard time managing everybody's unique styles."
- US Buy-Side

most important talent for a provider is to deliver high-quality data. Although it is useful to provide a number of reference-data support services, an outsourced service holds little value if the data is not pristine.

Many different solutions can offer the cleansing process and improve the quality of data. In addition to the outsourcer's skills, other characteristics of the provider are just as—if not even more—important to the decision process. Some of the previous opportunities have either failed or never achieved success, because some industry firms were not comfortable with the organization that would provide the services. Neutrality is a key point. Thirty-one percent of securities firms believe the best type of organization to provide them with reference data outsourcing is an industry utility (see Exhibit 40). The naturally cautious and competitive nature of many firms in this industry leads them to question the motives of a company that might profit by favoring one broker or technology over another, placing a neutral player in greater favor with the industry as a whole.

Exhibit 40
The best type of organization to provide ref data outsourcing to <u>your firm</u>



Source: TABB Group

Twenty-eight percent of firms prefer that a software vendor specializing in reference data provide the outsourcing service, preferring their reliability and domain expertise. Along the same lines, 15% of respondents would like a market data vendor, such as Reuters or Bloomberg, while another 15% suggest that a professional services firm to perform this function. Certainly, market data vendors have familiarity in the industry and proficiency with the content, while a professional services firm provides the opportunity for securities firms to transfer staff costs in a less painful manner.

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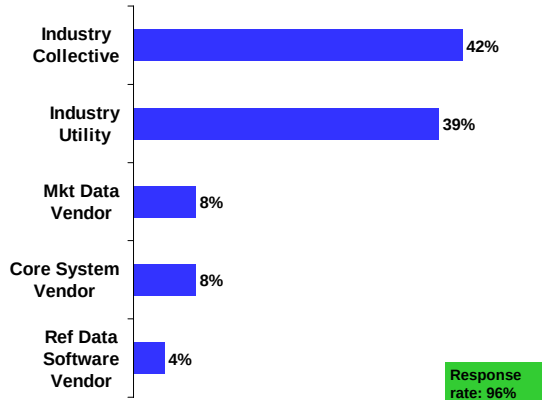
"Knowledge on use of data throughout the front-to-back process is very specialized within [our company]; there are three or four experts who really understand the data. If the process was outsourced how would [our firm] maintain that critical business knowledge?"
- US Buy-Side

Interestingly, when framed in a slightly different way, the question of a provider organization presents a different picture. The ideal central industry provider for many is an industry collective, a service shared and managed equally by all participants in the industry, where no profit motive exists. While just 5% said that this would be the best type of organization for **their firm**, 42% percent of securities firms believe that this would be the best type of organization for **the industry** (see Exhibit 41). Furthermore, another 39% believe that some industry utility (new or existing) is the best solution.

Although most firms believe that an industry collective or utility is best for the industry as a whole, when it comes to a solution for their firm's reference-data outsourcing, many more would choose commercial entities. When you think about it, it shouldn't be too surprising. It's not unlike NIMBY (not in my backyard). An industry collective is OK for everyone else, but I want the best commercial entity for my firm!

Exhibit 41
The best type of organization to provide a central industry ref data mgmt solution



Source: TABB Group

Key Points

- Both buy-side and sell-side institutions highly value data cleansing, but just 43% of firms have successfully implemented best practices for data cleansing.
- Over 80% of institutions believe that either there "should be" or "should probably be" an industry-wide solution to their reference-data problems.
- Forty-one percent of firms believe, with some reservations, that an effective outsourced reference data solution would be good for the industry, while the remaining 59% believe so *without reservations.*
- Sixty percent of institutions fear losing control of their data-management process.

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- Few firms are considering outsourcing client or counterparty data, while believing at the same time that product and corporate actions data can be effectively outsourced.
- Thirty-three percent of securities institutions say that the most important skill sought in an outsourcing provider is data cleansing.
- Neutrality is a key point. Twenty-three percent of securities firms believe the best type of organization to provide them with reference data outsourcing is a new industry utility.

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Conclusion

Enterprise data management has reached a high priority in the industry. All firms have initiatives in place to address the uniformly acknowledged need to have the highest quality data to support their trading, risk, processing and compliance functions. And the reference data process is improving. While these programs have improved upon the status quo, more needs to be done.

"We need control of our own view, or you lose track of your edge."
- European Sell-Side

Most respondents see their maintenance of data quality and process efficiency as a competitive advantage. Knowing that bad data is the root of most problems—contributing the greatest amount of resource drain—securities institutions will focus their efforts on improving data quality more than anything else. What was once viewed as a simple repository for somewhat stale information is now recognized as a key differentiator in the race to trade better, clear less expensively, and comply more confidently.

Since centralization and consistent standards are greatly desired but still not the norm, TABB Group believes that this will be the point of first strike for firms that strive to get it right. Since achieving a centralized repository of data following consistent and acknowledged standards is the most important factor in improving data quality, asset managers and brokers will initially focus on addressing the organizational and technological issues that create the obstacles. The information silos that exacerbate this are not in jeopardy of being eradicated, so the solution will likely reside externally, with a third-party provider or outsourcer. This will allow more data to be shared and re-used and eliminate redundancies.

"I am still ultimately responsible for this data being correct. Say I pay someone to do it for me. I am not off the hook."
- US Buy-Side

Few firms even know how good or bad their data is, as metrics are disdained for lack of either confidence or importance. Best practices presently are in place for data acquisition, but far less so for enrichment and cleansing. TABB Group believes that this will begin to change in the next year, as the importance of high quality data has reached the highest levels of management. This will catalyze those responsible for data management to identify processes to measure data quality and process efficiency in order to provide leverage to address these issues. Vendors are already developing and marketing tools that can more definitely quantify the progress of a

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firm's reference-data efforts. These tools are being implemented internally by some institutions, but they will also be used for validation by outsourcing providers to illustrate the value of their services.

Since the outsourcing model assumes a larger amount of control over the entire EDM process, in many ways it will be more capable of effectively measuring data problems and developing predictive models that will prevent additional errors from recurring.

"If five banks agree to use one provider, then it would be a home run."
- US Sell-Side

In assessing the opportunities for outsourcing, only one out of five feel that an industry-wide solution to reference data is NOT the way to go, indicating a surprisingly positive receptivity to this type of solution that will continue to expand. While concern remains among securities institutions about lack of control and retaining their firms' best interests, TABB Group believes that the industry—especially the sell-side—would more readily embrace the paradigm if presented with a product with a proven record offered by a neutral provider.

Hence, motivated by a hope that it will greatly improve the data quality and reduce their need for internal processes, providers of MRDS will market their solutions more aggressively, stressing the reliability and flexibility of their offerings. As most of these solutions already permit the flexibility to determine which data types and processes to include in the outsourced service, this effort will help them to gain increased confidence from the industry. While many firms will still abstain from this practice due to inflexible corporate culture, mistrust and lack of commitment, there's sufficient interest to support growth in the outsourcing and shared-service models.

"If they build it, we will come."
- US Sell-Side

It is probably venturing too far out onto the limb to predict that the industry will soon witness the introduction of such a service as an industry collective or utility, but the industry's appetite for the golden copy and its inability to produce it via internal means will promote the growth of outsourced services. As more institutions gain confidence in this solution model, the critical mass will enable greater improvements in service and shepherd the steady growth of managed reference data solutions.

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About

TABB Group

TABB Group is a Financial Markets advisory and thought leadership firm. Focusing on the intersection of the financial markets and technology, TABB Group has produced major studies on the future of trading technologies, the impact of the market structure changes on the use of real-time technologies. TABB Group members are regularly cited in the press and speak at industry conferences. For more information about TABB Group, go to www.tabbgroup.com.

The Author

Robert Iati joined the Tabb Group as a Partner in December 2004, following seven years with TowerGroup, where he was the Research Director of its Securities & Capital Markets practice. He has extensive experience in capital markets technology, covering areas of securities operations training, planning and development, and IT strategy and implementation for nearly 20 years. Bob has authored and interpreted surveys of global equity trading, direct market access, and the futures industry, analyzed the impact of changing market structures on global financial markets, and examined the critical processing issues faced by brokerage institutions.

Bob has also held senior positions at Lehman Brothers and at Deutsche Bank Securities, where he participated in a broad range of systems development projects. A frequent presenter at industry forums on many areas of securities operations, Bob has appeared on CNN and CNBC television and been quoted in publications such as *The Wall Street Journal*, *Business Week*, *Forbes*, & *The New York Times,* as well as brokerage industry trade media including *Traders, Wall Street & Technology, Institutional Investor* and *Securities Industry News*.

Bob holds an M.B.A. in finance and information systems from Rutgers Graduate School of Management and earned a B.A. degree in economics from Rutgers University. He also served on the faculty of the New York Institute of Finance and the Securities Operations Forum and has taught at New York University.

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